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CARDIAC FUNCTION AND HEART FAILURE

DO PATIENTS WITH DIASTOLIC HEART FAILURE PROGRESS TO SYSTOLIC HEART FAILURE?

ACC Poster Contributions
Georgia World Congress Center, Hall B5
Tuesday, March 16, 2010, 9:30 a.m.-10:30 a.m.

Session Title: Heart Failure with Preserved Ejection Fraction and Diastolic Function
Abstract Category: Cardiomyopathies/Myocarditis/Pericardial Disease
Presentation Number: 1236-80

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Background: It is unclear whether, how often or why patients with diastolic heart failure (DHF) progress to systolic heart failure (SHF) prior to death.

Methods/**Results:** Among consecutive patients hospitalized with HF at a single center (1987 through 2001; n=6076), 2429 had SHF (autopsy in 169 (7.0%)); 2167 had DHF (autopsy in 158 (7.3%)) and 1480 had no EF at time of HF event (autopsy in 113 (7.6%)). The clinical characteristics of patients with autopsy were similar to those without. For autopsied DHF patients, 152 (96%) had at least one subsequent echo and the echo closest to death was analyzed. If this showed EF<50%, the closest preceding echo was also reviewed. Among the 152 DHF patients with repeat EF, EF declined from HF admission (61±7%) to repeat echo (50±17%, p<0.0001). The median time from initial to repeat echo was 115 days and from repeat echo to death was 100 days. Overall, 56 (37%) of the autopsied DHF patients had EF < 50% at repeat echo. Of these, 33 had another echo in between HF hospitalization and the echo closest to death. In these 33 patients, EF went from 60±7% to 47±13% to 34±11%, (p<0.0001 for trend). Age, creatinine at HF admission and prevalence of hypertension, coronary disease, diabetes, and atrial fibrillation were similar among patients who did vs did not develop SHF. Progression to SHF was more common in males (47%) than females (29%, p=0.02). Survival (from HF hospitalization) tended to be lower in those who did vs did not develop SHF (Log-Rank p = 0.148).

Conclusions: These data suggest that it is common for patients with DHF to progress to SHF as this occurred in 37% of autopsied DHF patients. Analysis of autopsy data (coronary artery disease and hypertrophy/fibrosis severity) is ongoing to determine why patients with DHF progress to SHF.